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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,501	12/07/2000	Raul Rico	00P9039US	1258

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Siemens Corporation
Intellectual Property Department
186 Wood Avenue South
Iselin, NJ 08830

EXAMINER
PEREZ, GUILLERMO

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 01/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/731,501	RICO ET AL.
	Examiner	Art Unit
	Guillermo Perez	2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 December 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1. Claims 1, 3-9, 11-12, 14, 16-18, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Debleser (U. S. Pat. 6,265,805 B1).

Referring to claim 1, Debleser discloses a method for tuning the torsional natural frequency of a rotor (refer to the symmetry shown in figure 3) comprising the step of:

forming within winding slots (15) defined by radially projecting winding teeth (26) at least one tuning slot (16 in the symmetric rotor of figure 3) that extends radially inwardly from the bottom of the winding slot (15) a distance to tune the rotor to a desired torsional natural frequency.

Referring to claims 3, 7, 11, 16, and 20, Debleser discloses that the at least one tuning slot (16) is positioned at a location that minimizes impact to the electromagnetic characteristics of the rotor cross-section (by providing a symmetric location to the slots 16).

Referring to claims 4, 8, and 12, Debleser discloses a plurality of tuning slots (16).

Referring to claim 5, Debleser discloses a method for tuning the torsional natural frequency of a rotor having opposing poles and a quadrature axis, comprising the step of forming within the winding slots (15) defined by radially projecting winding teeth (26) that are positioned substantially at the quadrature axis, at least one tuning slot (16) that extends radially inwardly from the bottom of the winding slot (15) a distance to tune the rotor to a desired torsional natural frequency (figure 3).

Referring to claim 6, Debleser discloses that the at least one tuning slot (16) has a width smaller than the width of any winding wire (11) received within the winding slot (15) to prevent winding wire (11) from passing into the tuning slot (16).

Referring to claim 9, Debleser discloses a rotor comprising:

a rotor shaft (1);

a cylindrically configured rotor body (figure 3) formed as part of the shaft (1) and having a plurality of radially projecting winding teeth (26) that define winding slots (15) for receiving winding wire (11) therein, the winding slots (15) having a bottom portion spaced radially inward; and

at least one first winding slot (15) having a tuning slot (16) that extends radially inward from the bottom thereof a distance that tunes the rotor to a desired torsional natural frequency; and

at least one second winding slot (39) being devoid of a tuning slot.

Referring to claim 14, Debleser discloses a rotor comprising:

a rotor shaft (1);

a cylindrically configured rotor body formed as part of the shaft (1) and having a plurality of radially projecting winding teeth (26) defining winding slots (15) for receiving winding (11) wire therein, the rotor body having two or more poles and a quadrature axis, the winding slots (15) having a bottom spaced radially inward; and

at least one tuning slot (16) positioned at the quadrature axis and extending radially inward from the bottom of the winding slot (15) a distance that tunes the rotor to a desired torsional natural frequency.

Referring to claim 17, Debleser discloses a plurality of tuning slots (16) positioned substantially at the quadrature axis.

Referring to claim 18, Debleser discloses a rotor comprising:

a rotor shaft (1);

a cylindrically configured rotor body formed as part of the shaft (1), said rotor body having a plurality of radially projecting winding teeth (26) defining winding slots (15) for receiving winding wire (11) therein, said rotor body having two poles (18) and a quadrature axis, said winding slots (15) having a bottom spaced radially inward; and

at least one tuning slot (16) extending radially inward from the bottom of the coil slot (15) a distance that tunes the rotor to a desired torsional natural frequency, wherein said winding slots (39) positioned at said poles are devoid of any tuning slot.

2. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi (U. S. Pat. 4,827,172).

Referring to claim 1, Kobayashi discloses a method for tuning the torsional natural frequency of a rotor comprising the step of:

forming within winding slots (34,36) defined by radially projecting winding teeth (52) at least one tuning slot (48,50) that extends radially inwardly from the bottom of the winding slot (36) a distance to tune the rotor to a desired torsional natural frequency.

Referring to claims 2, 10, 15, and 19, Kobayashi discloses that the at least one tuning slot (48,50) has a width (48) smaller than the diameter of any winding wire (55) received within the winding slot (34,36) to prevent winding wire (55) from passing into the tuning slot (48,50).

Referring to claims 3, 7, 11, 16, and 20, Kobayashi discloses that the at least one tuning slot (48,50) is positioned at a location that minimizes impact to the electromagnetic characteristics of the rotor cross-section.

Referring to claims 4, 8, and 12, Kobayashi discloses a plurality of tuning slots (48,50).

Referring to claim 5, Kobayashi discloses a method for tuning the torsional natural frequency of a rotor having opposing poles and a quadrature axis, comprising the step of forming within the winding slots (36) defined by radially projecting winding

teeth (52) that are positioned substantially at the quadrature axis, at least one tuning slot (48,50) that extends radially inwardly from the bottom of the winding slot (36) a distance to tune the rotor to a desired torsional natural frequency.

Referring to claim 6, Kobayashi discloses that the at least one tuning slot (48,50) has a width (48) smaller than the width of any winding wire (55) received within the winding slot (36) to prevent winding wire (55) from passing into the tuning slot (48).

Referring to claim 9, Kobayashi discloses a rotor comprising:

a rotor shaft (20);

a cylindrically configured rotor body (26) formed as part of the shaft (20) and having a plurality of radially projecting winding teeth (52) that define winding slots (34,36) for receiving winding wire (55) therein, the winding slots (34,36) having a bottom portion spaced radially inward; and

at least one first winding slot (36) having a tuning slot (48,50) that extends radially inward from the bottom thereof a distance that tunes the rotor (26) to a desired torsional natural frequency; and

at least one second winding slot (34) being devoid of a tuning slot.

Referring to claim 13, Kobayashi discloses that the rotor body (26) is formed of a plurality of rotor laminations stacked together.

Referring to claim 14, Debleser discloses a rotor comprising:

a rotor shaft (20);

a cylindrically configured rotor body formed as part of the shaft (20) and having a plurality of radially projecting winding teeth (52) defining winding slots (34,36) for

receiving winding (55) wire therein, the rotor body having two or more poles and a quadrature axis, the winding slots (34,36) having a bottom spaced radially inward; and

at least one tuning slot (48,50) positioned at the quadrature axis and extending radially inward from the bottom of the winding slot (34,36) a distance that tunes the rotor to a desired torsional natural frequency.

Referring to claim 17, Debleser discloses a plurality of tuning slots (48,50) positioned substantially at the quadrature axis.

Referring to claim 18, Debleser discloses a rotor comprising:

a rotor shaft (20);

a cylindrically configured rotor body formed as part of the shaft (20), said rotor body having a plurality of radially projecting winding teeth (52) defining winding slots (34,36) for receiving winding wire (55) therein, said rotor body having two poles and a quadrature axis, said winding slots (34,36) having a bottom spaced radially inward; and

at least one tuning slot (48,50) extending radially inward from the bottom of the coil slot (36) a distance that tunes the rotor to a desired torsional natural frequency, wherein said winding slots (34) positioned at said poles are devoid of any tuning slot.

Response to Arguments

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

In response to Applicant's remark that Kobayashi simply discloses a winding slot of a particular shape, it must be noted that Kobayashi discloses a slot (48,50) formed at the bottom of a slot (46). The Applicants claim a winding slot of a particular shape,

which is a slot (34) at the bottom of a slot (30). The winding slot (46) in Kobayashi has a slot (48,50) radially extending from its bottom (figure 2). The winding slots extensions (48,50) in Kobayashi as well as in the Applicant's claimed slots (34) are parts of the slot cell. There is no difference between the claims and Kobayashi.

It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the Notice of References Cited for art disclosing all the claimed structural limitations.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Perez whose telephone number is (703) 306-5443. The examiner can normally be reached on Monday through Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308 1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3432 for regular communications and (703) 305 3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

Guillermo Perez
January 15, 2003

NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800